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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
NEWMAN, MICHAEL A	
ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/722,631	BOHN ET AL.	
	Examiner	Art Unit	
	Michael A. Newman	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 October 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *08/09/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment to the claims received on October 2nd, 2007 has been entered.

2. The amendment of claims 1, 15, 20 and 21 is acknowledged.

3. In view of the amendment to claims 1 and 15, the rejection under 35 U.S.C. 102 of claims 1-14, 15, 17, 19, 21 – 28 is withdrawn.

Response to Arguments

4. Applicant's arguments in pages 6 – 9 of the Remarks filed on October 2nd, 2007, with respect to rejections of claims 1, 15 and 21 in view of Tuli (U.S. Patent No. 5,942,761) have been considered but are moot in view of the new ground(s) of rejection.

a. Regarding claims 1 and 15, they have been amended to include the newly added limitation that the input device further comprises "an end of scan switch configured to be actuated when the platen is in the second position, the end of scan switch configured to provide tactile feedback when activated." Applicant correctly points out that Tuli does not teach start or end switch. The previous version of claims 20 and 29 included a similar limitation. The claims were rejected under 35 U.S.C. 103 over Tuli in view of Barton et al. (U.S. Patent No. 7,162,060) in the previous office action. In pages 7 and 8 applicant further submits that Barton also does not teach an end switch able "to provide the user.., with a desirable level of feedback." The examiner respectfully disagrees. Barton

not only teaches the use of opto-interrupter switches, but also the use of end stops (Barton Fig. elements 312 and 314). In fact, Barton suggests that, in a preferred embodiment, the assemblies 312 and 314 are mounted on opposite ends of the range of movement. Each assembly includes a *mechanical end stop* and an opto-interrupter limit switch (Barton Col. 8 lines 9 – 17). Such mechanical end stops would indeed provide tactical feedback (by bumping, stopping, etc) to the user at the ends of the scan range. Given this reasonable interpretation, claims 1, 15 and 21 and its dependents have been rejected on new grounds in view of Barton.

b. Regarding claim 21, it has been amended to include the newly added step of "monitoring an encoder target until a predetermined pattern is detected; and in response to the detection of the predetermined pattern, capturing a series of scan lines..." Applicant submits that Tuli does not teach such a step. The examiner respectfully disagrees. Tuli teaches that the platen has a patterned strip which determines when scanning occurs. Specifically, the strip has black or opaque elements (See Tuli Fig. 4 elements 14). The line of information on the fingerprint scanned by the sensor is only sent to the microprocessor *at the instant* a black of opaque element is detected (Tuli Col. 6 lines 50 – 55). Therefore, the predetermined pattern is a black/opaque element, and the scanner only captures and sends the finger image as a result of detecting the predetermined pattern. Given this reasonable interpretation, the examiner respectfully insists that the standing 102 rejection of claim 21 under Tuli is appropriate.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In *re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-30 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-30 of copending Application No. 10/722,795. Claims 1, 15 and 21 of the current application are a broader version of claims 1, 11 and 23 of copending Application No. 10/722,795 with omission of:

(1) a scan head, which is *movably* mounted,

(2) a housing *having an angled way* and

(3) a step of *combining* a series of scan lines.

Although the conflicting claims are not identical, they are not patentably distinct from each other because omission of element and its function in combination is obvious expedient if remaining elements perform same functions as before. In re KARLSON (CCPA) 136 USPQ 184 (1963).

Claim Rejections - 35 USC § 102

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 21 – 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Tuli (U.S. Patent No. 5,942,761).

a. Regarding claim 21 – 23, 25 and 26, Tuli teaches a method of scanning a biometric image with an input device having a platen and a housing, comprising: sensing movement of the platen relative to the housing **(Col. 5 lines 45 – 50)**; monitoring an encoder target until a predetermined pattern is detected **(Col. 6 lines 47 – 51)**; and in response to the detection of the predetermined pattern, capturing a series of scan lines of the biometric image on the platen and a corresponding pattern of an encoder target as the platen is moved **(Col. 6 lines 51 – 55)**.

b. Regarding claim 24, Tuli teaches the method of claim 21, wherein the movement is a vertical direction **(Figs 15 and 16) [Note that the scanning operation is the same as that of the horizontal movement embodiment]**.

c. Regarding claim 27, Tuli teaches the method of claim 21, further comprising the step of using the pattern on the encoder target to combine the series of scan lines to form an image representative of the biometric image **(Col. 6 lines 47 – 67)**.

d. Regarding claim 28, Tuli teaches the method of claim 21, wherein the step of sensing movement of the platen activates a scan head **(Col. 6 lines 9 – 10)**.

Claim Rejections - 35 USC § 103

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 1 – 15, 17, 19, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tuli (U.S. Patent No. 5,942,761) in view of Barton et al. (U.S. Patent No. 7,162,060). Hereinafter referred to as Tuli and Barton respectively.

a. Regarding claims 1, 6, 7, 8, 11 and 12, Tuli teaches an input device for scanning a biometric image, comprising: a housing **(Tuli Fig. 1 – element 1)**; a scan head mounted to the housing **(Tuli Fig. 1 – element 7)**; a platen moveably mounted to the housing for movement relative to the housing and the scan head between a first position and a second position **(Tuli Fig. 1 – element 5)**; a biasing device configured to bias the platen into its first position **(Tuli Fig. 1 – element 9)**. However, **Tuli fails to teach** an end of scan switch configured to be actuated when the platen is in the second position, the end of scan switch configured to provide tactile feedback when activated. **Pertaining to the same**

field of endeavor; Barton teaches a platen movement control system including two end stop assemblies including a mechanical end stop and opto-interrupter limit switches (Barton Fig. 3 – elements 312 and 314) at each end of the platen's range of movement (Barton Col. 8 lines 9 – 17). [Note that such mechanical end stops would cause the assembly to stop, making the user's finger feel a bump]. Barton teaches that these switches are used to verify that the platen has been moved to a desired location at and end point or to alert the movement has reached a maximum limit (Barton Col. 8 lines 26 – 31). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Tuli by adding the limit assemblies switches as taught by Barton to signal the device or user when the platen has moved from its starting point and reached the end point of the scan so as to accurately obtain a full fingerprint scan while avoiding damage caused by exceeding the platen's range of motion.

b. Regarding claim 2, Tuli teaches the device of claim 1, further comprising an encoder target **(Tuli Fig. 4 – element 13; Col. 6 lines 48 – 49)**.

c. Regarding claim 3, Tuli teaches the device of claim 2, wherein the scan head is configured to scan a pattern on the encoder target and to capture a scan line of the biometric image and a portion of the pattern on the encoder target **(Tuli Col. 6 lines 39 – 46)**.

d. Regarding claim 4, Tuli teaches the device of claim 2, where in the scan head is adapted to capture scan lines as the platen is moved **(Tuli Col. 5 lines 45 – 50)**.

e. Regarding claim 5, Tuli teaches the device of claim 2, wherein the encoder target comprises a repeating pattern **(Tuli Fig. 4 – element 13)**.

f. Regarding claim 9, Tuli teaches the device of claim 2, wherein a pattern on the encoder target is used for calibrating a series of scan lines to form an image representative of the biometric image **(Tuli Col. 5 lines 55 – 57)**.

g. Regarding claim 10, Tuli teaches the device of claim 1, wherein movement of the platen away from the first position activates the scan head **(Tuli Col. 5 lines 9 – 11)**.

h. Regarding claim 13, Tuli teaches the device of claim 1, wherein the biometric image comprises a fingerprint **(Tuli Fig. 1 – element 17 of 8 – a finger)**.

i. Regarding claim 14, Tuli teaches the device of claim 3, wherein the platen comprises a transparent window, an upper surface and lower surface **(Tuli Fig. 1 element 5 – Col. 5 line 39)**, the upper surface configured to provide a contact area for the biometric image **(Tuli Fig. 1 element 17 – Col. 5 line 37)**, wherein the housing is configured to provide a support surface **(Tuli Fig. 3 element 12 – Col. 6 lines 33 – 36)** and the platen moves parallel to the support surface **(Tuli Fig. 1-initial state- vs. Fig. 2-final state-)**, wherein the scan head is adaptive to capture scan lines as the platen is moved **(Tuli Col. 6 lines 39 – 46)**, wherein the

biasing device comprises a coiled spring **(Tuli Fig. 1 – element 9)**, and wherein a pattern on the encoder target is used for calibrating a series of scan lines to form an image representative of the biometric image **(Tuli Col. 5 lines 55 – 57)**, the biometric image comprising a fingerprint **(Tuli Fig. 1 element 17 – Col. 5 line 37)**.

j. Regarding claims 15 and 19, Tuli teaches an input device for scanning a biometric image, comprising: a housing **(Fig. 1 – element 1)**; a platen moveably mounted to the housing for movement relative to the housing between a first position and a second position **(Fig. 1 – element 7)**; an encoder target associated with the platen **(Fig. 4 – element 13; Col. 6 lines 48 – 49)**; and a scan head **(Fig. 1 – element 7)**, the scan head being configured to scan a pattern on the encoder target and to capture a scan line of the biometric image and a portion of the pattern on the encoder target **(Col. 6 lines 39 – 46)**. However, **Tuli fails to teach** an end of scan switch configured to be actuated when the platen is in the second position, the end of scan switch configured to provide tactile feedback when activated. **Pertaining to the same field of endeavor, Barton teaches a platen movement control system including two end stop assemblies including a mechanical end stop and opto-interrupter limit switches (Barton Fig. 3 – elements 312 and 314) at each end of the platen's range of movement (Barton Col. 8 lines 9 – 17). [Note that such mechanical end stops would cause the assembly to stop, making the user's finger feel a bump]. Barton teaches that these switches are used to**

verify that the platen has been moved to a desired location at and end point or to alert the movement has reached a maximum limit (Barton Col. 8 lines 26 – 31). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Tuli by adding the limit assemblies switches as taught by Barton to signal the device or user when the platen has moved from its starting point and reached the end point of the scan so as to accurately obtain a full fingerprint scan while avoiding damage caused by exceeding the platen's range of motion.

k. Regarding claim 17, Tuli teaches the device of claim 15, further comprising a biasing device **(Tuli Fig. 1 – element 9)**.

l. Regarding claim 29, Tuli teaches all the limitations of the independent claim 21 respectively as set forth in the 102 rejection of claim 21 above. However, **Tuli fails to teach** a start of scan sensor having a first state and a second state, wherein movement of the platen away from the first position changes the state of the start of scan sensor; and an end of scan sensor having a first state and a second state, wherein contact between the platen and the end of scan sensor changes the state of the end of scan sensor. **Pertaining to the same field of endeavor, Barton teaches a platen movement control system including two end stop opto-interrupter limit switches (Barton Fig. 3 – elements 312 and 314) at each end of the platen's range of movement. Barton teaches that these switches are used to verify that the platen has been moved to a desired location at and end point or to alert the movement**

has reached a maximum limit (Barton Col. 8 lines 26 – 31). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Tuli by adding the limit switches as taught by Barton to signal the device or user when the platen has moved from its starting point and reached the end point of the scan so as to accurately obtain a full fingerprint scan while avoiding damage caused by exceeding the platen's range of motion.

m. Regarding claim 30, Tuli teaches all the limitations of the independent claim 21 as set forth in the 102 rejection of claim 21 above. Tuli also teaches that the capturing step is accomplished with a single sensor **(Tuli Fig. 1 element 7)**, further comprising the steps: translating the platen **(Col. 5 lines 45 – 50)**; and using the pattern on the encoder target to combine the series of scan lines to form an image representative of the biometric image **(Col. 6 lines 47 – 67)**. However, **Tuli fails to teach** sensing that the scan is complete with an end of scan switch. **Pertaining to the same field of endeavor, Barton teaches a platen movement control system including two end stop opto-interrupter limit switches (Barton Fig. 3 – elements 312 and 314) at each end of the platen's range of movement. Barton teaches that these switches are used to verify that the platen has been moved to a desired location at and end point or to alert the movement has reached a maximum limit (Barton Col. 8 lines 26 – 31). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Tuli by adding**

the limit switches as taught by Barton to signal the device or user when the platen has moved from its starting point and reached the end point of the scan so as to accurately obtain a full fingerprint scan while avoiding damage caused by exceeding the platen's range of motion.

11. Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tuli (U.S. Patent No. 5,942,761) in view of Barton et al. (U.S. Patent No. 7,162,060), as applied to claim 15 above, and further in view of Scott et al. (U.S. Patent No. 6,178,255). Hereinafter referred to as Tuli, Barton and Scott respectively.

a. Regarding claims 16 and 18, Tuli as modified by Barton teaches all the limitations of the independent claim 15 as set forth in the 103 rejection of claim 15 above. Tuli also teaches that the housing is configured to provide a support surface **(Fig. 3 element 12 – Col. 6 lines 33 – 36)** and the platen moves parallel to the support surface **(Fig. 1-initial state- vs. Fig. 2-final state-)**; However, **Tuli fails to teach** that the encoder target comprises a non-repeating pattern. **Pertaining to the same field of endeavor, Scott teaches a similar fingerprint scanner where the position of the platen is determined by viewing a bar code (called a "caliper") along side the desired finger print (Scott Fig. 10 – element 90 and Fig. 11) [Note that the caliper is a non-repeating 12-bit binary code pattern, See Scott Col. 6 lines 11 – 21]. Furthermore, Scott teaches that the use of such a caliper allows for individual segments of a fingerprint, which have been randomly recorded and stored, to be**

accurately and coherently reassembled (Scott Col. 2 lines 46 – 51).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace Tuli's repeating pattern with a non-repeating pattern as taught by Scott to relax the requirements of sequentially recording and storing the fingerprint scan lines while still accurately reproducing the image.

12. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tuli (U.S. Patent No. 5,942,761) in view of Barton et al. (U.S. Patent No. 7,162,060), as applied to claim 15 above, and further in view of Aosaki et al. (U.S. Patent No. 5,467,198). Hereinafter referred to as Tuli, Barton and Aosaki respectively.

a. Regarding claim 20, Tuli as modified by Barton teaches all the limitations of the independent claim 15 as set forth in the 103 rejection of claim 15 above. Furthermore, Tuli, as modified by Barton with regards to claim 15, also teaches a start of scan sensor having a first state and a second state **(Barton Fig. 3 elements 312 and 314) [Note that the end stop assemblies include an opto-interrupter limit switch]**, wherein the movement of the platen away from the first position changes the state of the start of scan sensory **(Barton Col. 8 lines 22 – 26) [Note that when the prism is moved away from the opto-interrupter switch, the flag no longer breaks the light beam and changes the state]**. Barton, further teaches that the signals from the opto-interrupters can be used to indicate that movement has reached a maximum limit and issue and alarm

(Barton Col. 8 lines 26 – 31). However, **they fail to specifically teach** that changing the state of the start of scan sensor creates an *audible tone* and the end of scan switch is further configured to provide an audible indication when activated. **Pertaining to the same field of endeavor, Aosaki teaches a scanning system with a translating sensor (Aosaki Fig. 4 elements 57 and 58). Aosaki teaches that upon power-on the sensor has to move to its initial position. When the sensor is set in its initial position, a buzzer generates an alarm sound to indicate that the image scanner is ready for scanning (Aosaki Col. 12 lines 56 – 64). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the signals of Barton's opto-interrupter limit switches at both ends of the finger scanner movement to issue an alarm *sound*, as taught by Aosaki, in order to communicate to the operator that the scanner is in the start position and ready to start scanning or that it has moved across the entire scanning range and finished.**

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Wells et al. (U.S. Pg Pub No. 2004/0192442) teaches a slot-type gaming unit player restriction system including a fingerprint scanner that lets a user know it has completed scanning by generating a "beep".

b. Smith (U.S. Pg Pub No. 2002/0021827) teaches a finger print scanner that automatically captures, evaluates the quality of the captured fingerprint and emits a tone to indicate a completed scanning process.

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Newman whose telephone number is (571) 270-3016. The examiner can normally be reached on Mon - Thurs from 9:30am to 6:30pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir A. Ahmed can be reached on (571) 272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

M.A.N.

SAMIR AHMED
SUPERVISORY PATENT EXAMINER